PSES-2126C

PSES-2126C: 26-Port L2 Managed Fast Ethernet PoE Switch With 2 SFP Dual Media

Key Features

- **Standard compliance**
  - ---IEEE 802.3 10Base-T Ethernet (twisted-pair copper)
  - ---IEEE 802.3u 100Base-TX Ethernet (twisted-pair copper)
  - ---IEEE 802.3ab 1000Base-T Ethernet (twisted-pair copper)
  - ---IEEE 802.3z 1000Base-SX/LX Ethernet
  - ---IEEE 802.3x flow control capability
  - ---ANSI/IEEE 802.3 auto-negotiation
  - ---IEEE 802.1q VLAN
- **RoHS Compliance**
- **Subscriber Interface**
  - ---Port 1-24 are 10/100Mbps Fast Ethernet ports.
  - ---Port 25,26 are Gigabit TP/SFP Fiber auto sense
  - ---Auto-Negotiation and Auto-MDIX
  - ---Backpressure flow control for half duplex.
  - ---802.3x flow control for full duplex.
  - ---Connector: 24 RJ-45 and 2 dual media, RJ-45/SFP
- **Performance**
  Switching capacity:
  - ---Non-blocking switch fabric supports up to 24FE+2GbE, ports
  - ---8 K MAC addresses
  - ---256k packet buffer and 128k control memory
  - ---The maximum throughput is 8.8Gbps
  - ---With 64 bytes packets throughput is 6.547Mpps

  VSM(Virtual Stacking Management)
  - ---Support 16 devices stacking
  - ---Multiple switches can be managed via one IP address, just like software stacking
  - ---Low cost and easily to establish network environment, not extra hardware require.
  - ---Not center on the physical location of wiring closets

  VLAN
  - ---Supports SVL/IVL configuration to meet your VLAN requirement
  - ---Port-base VLAN

Benefits

- **PoE Save Your Power Infrastructure and Installation Cost**
  24-PoE ports allow power (185W) to be supplied to end devices, such as Wireless Access Points or VoIP Phones, directly through the existing LAN cables, eliminating costs for additional AC wiring and reducing Installation Cost. It frees your wireless AP deployment from restriction due to power outlet location. By supplying the power end-span, you can centralize power distribution and backup without the need to increase infrastructure.

- **QoS with Four Priority Queues**
  The QoS(Quality Of Service) feature provides four internal queues to support four different classifications of traffic. High priority packet streams experience less delay inside the switch, which supports lower latency for certain delay-sensitive traffic. The PSES-2126C can classify the packet as one of the four priorities according to vip port, 802.1p priority tag, DiffServ and/or IP TOS. The QoS operate at full wire speed. The actual scheduling at each egress port can be based upon a strict priority, weighted round robin or a mix of both.

- **Port Mirroring**
  This mechanism helps track network errors or abnormal packet transmission without interrupting the flow of data. Allow ingress traffic to be monitored by a single port that is defined as mirror capture port. The mirror capture port can be any 10/100 port, 10/100/1000 port. Mirroring multiple ports is possible but can create congestion at the mirror capture port.

- **Q-in-Q VLAN for performance & security**
  The VLAN feature in the switch offers the benefits of both security and performance. VLAN is used to isolate traffic between different users and thus provides better security. Limiting the broadcast traffic to within the same VLAN broadcast domain also enhances performance. VLAN support enabling advanced techniques such as "802.1Q-in-1Q" to be deployed.

- **Isolated Group, Provide Secure for Certain Ports**
  The isolated group feature allows certain ports to be designated as protected. All other ports are non-isolated. Traffic between isolated group members is blocked. Traffic can only be sent from isolated group to non-isolated group.

- **Mac-based 802.ad LACP with Automatic Link Fail-over**
  Dynamic fail-over means packets will not get assigned to any trunk member port that has failed. If one of the ports were to fail, traffic will automatically get distributed to the remaining active ports.

- **802.1x Access Control Improve Network Security**
  802.1x features enable user authentication for each network access attempt. Port security features allow you to limit the number of MAC addresses per port in order to control the number of stations for each port. Static MAC addresses can be defined for each port to ensure only registered machines are allowed to access. By enabling both of these features, you can establish an access mechanism based on user and machine identities, as well as control the number of access stations.

- **802.1d Compatible & 802.1w Rapid Spanning Tree**
  For mission critical environments with multiple switches supporting STP, you can configure the switches with a redundant backup bridge path, so

Gigabit Switch

---IEEE802.1q tag-base VLAN, 4094 max, up to 256 active VLANs included static plus dynamic entry

---IEEE802.1q tag-base VLAN

---Flooding unknown vlan frame setting, can flood packet with some vlan tag associated to a invalid/inactive vlan

---In tag-base VLAN, supports egress/ ingress packet filter

---Q-in-Q is an efficient method for enabling Subscriber Aggregation.

QoS

---Port Based (VIP Port), 802.1p , TOS and Diffserv(IPv4/IPv6) based QoS packet classification

---Supports four level priority queues to prioritize in-bound and out-bound traffic

---Supports two scheduling, WRR and Strict

---Supports priority in a Q-in-Q tag

Broadcast Storm

---Multicast/Broadcast/Unknown-Unicast Storm suppression.

Port Mirroring

---Support 1: N RX port mirroring.

---Supports port sniffer function with 3 modes:
(TX Monitor Mode, RX Monitor Mode and TX-RX pair Monitor Mode).

Isolated Group

---Provide one group allows certain ports to be designated as protected.

Restricted Group

---Can decide the direction of transmitting packets for the specific port

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Rate Limit

---Ingress rate limit:
Port 1~24: 1K up to 100Mbps
Port 25, 26: 1K up to 1000Mbps

---Egress rate limit:
Port 1~24: 1K up to 100Mbps
Port 25, 26: 1K up to 1000Mbps

• **PoE Specification**

---24 IEEE802.3af PoE PSE ports

---Endpoint with 48VDC power through RJ-45 pin 1, 2, 3, 6.

---PoE-PSE activity LED indicator.

---185 watts of total power (up to 15.4 watts for 12 ports, or up to 7.7 watts for 24 ports)

---Auto detect powered device and consumption levels

---Supports per port power consumption monitoring

---Smart feature for PD on/off, PD detection, power level, PD status and power feeding priority

---Circuit protection to prevent power interference between ports

---Supports per port PoE State setting

transmission and reception of packets can be guaranteed in event of any fail-over switch on the network.

• **2 Dual Media for Flexible Fiber Connection**

Dual media port 25 and 26 are provided for flexible fiber connection. You can select to install optional transceiver modules in these slots for short, medium or long distance fiber backbone attachment. Use of the SFP will disable their corresponding built-in 10/100/1000Base-T connections.

• **Broadcast/Multicast/Unknown-unicast Storm Control**

To limit too many broadcast/multicast/unknown-unicast flooding in the network, broadcast/multicast storm control is used to restrict excess traffic. Threshold values are available to control the rate limit for each port. Packets are discarded if the count exceeds the configured upper threshold.

Technical Specifications

• **LED Description**

LED	Color	Function
System LED		
CPURUN	Green	-Blinks when CPU is on and good
POWER	Green	-Lit when AC power is on and good
ACT	Green	-Lit when LEDSET set on active mode
FDX	Green	-Lit when LEDSET set on full-duplex mode
SPD	Green	-Lit when LEDSET set on speed mode
10/100Mbps Ethernet TP Port 1 to 24 LED		
LNK	Green	-Lit when connection with remote device is good -Off when cable connection is not good
ACT/FDX / SPD	Amber (TP Port 1 to 24 LED)	(a)LEDSET set on ACT (active) mode: -Blinks when any traffic is present (b)LEDSET set on FDX (full-duplex) mode: -Lit when full-duplex mode is active -Blinks when any collision is present (c)LEDSET set on SPD (speed) mode: -Lit when 100Mbps speed is active -Off when 10Mbps speed is active
10/100/1000Mbps Gigabit TP/Fiber Port 25, 26 LED		
LNK	Green	-Lit when connection with remote device is good -Off when cable connection is not good
FX	Green	-Lit when Fiber port is active -Off when TP port is active
ACT/FDX / SPD	Green (Port 25, 26 LED)	(a)LEDSET set on ACT (active) mode: -Blinks when any traffic is present (b)LEDSET set on FDX (full-duplex) mode: -Lit when full-duplex mode is active -Blinks when any collision is present (c)LEDSET set on SPD (speed) mode: -Lit when 1000Mbps speed is active -Off when 10/100Mbps speed is active
PoE Port Status Indication LEDs		
PoE-PSE ACT	Green	-Lit when PoE Power is active

• **Cable and Maximum Length:**

TP	Cat. 5 UTP cable, up to 100m
1000Base-SX SC M-M	Up to 220/275/500/550m, which depends on Multi-Mode Fiber type
1000Base-LX SC S-M	Single-Mode Fiber, up to 10/30/50Km
1000Base-LX WDM SC S-M	Single-Mode Single Fiber, Bidi 20Km

Gigabit Switch *(vertical left margin)*

---Supports per port power priority setting
• **Protocol**
  LACP
---2 Fast Ethernet +1 Gigabit Ethernet groups
---Per-group max 4 members
---Provides DA, SA and DA+SA Mac-based trunking with automatic link fail-over
  GVRP/GARP
---802.1q with GVRP/ GARP
  Multicasting
---Supports IGMP snooping including active and passive mode
  STP/RSTP
---802.1d/1w/1s STP
• **Network Security**
---802.1x access control
---Isolated group
---Restricted group
---Management Access Policy Control
---Static mac, to limit which mac addresses can pass through or not
---Mac addresses learning limit, to set up the maximum amount of mac that each port can learn
• **Snmpv1,v2c Network Management**
  • RFC 1213 MIB (MIB-II)
---Interface MIB
---Address Translation MIB
---IP MIB
---ICMP MIB
---TCP MIB
---UDP MIB
---SNMP MIB
  • RFC 1757 RMON MIB
---Statistics Group 1
---History Group 2
---Alarm Group 3
---Event Group 9
  • RFC 1493 Bridge MIB
  • RFC 1643 Ethernet MIB
  • Enterprise MIB

Overview

PSES-2126C supports 24 10/100Mbps Auto-negotiation, Auto-MDIX Ethernet ports and Power over Ethernet to IEEE 802.3af compliant devices. With the 24-port featuring PoE function, the PSES-2126C is an ideal solution for wireless AP, VoIP phones, security video cameras. It's fully compliant with the standards of IEEE 802.3/u/x/z/ab/af. It is equipped with 24 UTP (RJ-45) ports and 2 of which are dual media ports that accommodate optional 10/100/1000 Base-T or SFP modules. In addition, the switch implements the QoS (Quality of Service), Mac Filtering Policy, Port Mirror, VLAN and full L2 protocol. The overall network management is enhanced and the network efficiency is also improved to accommodate high bandwidth applications with security.

Technical Specifications

• **Hardware Spec.**

Feature	Detailed Description
Voltage	100~240 VAC
Frequency	50~60 Hz for AC Power
Power Requirement	210W
Total Power for PoE	185W
Ambient Temperature	0 to 40℃
Humidity	5% to 90%
Dimensions	45(H) x 442(L) x 366(W) mm, 19" 1U
Weight	3.3kg
Safety	Comply with FCC Part 15 Class A & CE Mark Approval

Packing Information

Carton Dimensions (mm)	pcs/Carton	N.W (KG)	G.W (KG)
530x512x345	5	21	22

Ordering Information

PSES-2126C	26-Port L2 Managed Fast Ethernet PoE Switch With 2 SFP Dual Media

Optional SFP Module	
SFP.LC	1000Base-SX GE SFP Fiber Module, LC Multi-Mode 850nm
SFP.LC.M2	1000Base-SX GE SFP Fiber Module, LC Multi-Mode 1310nm 2km

Note:
We recommend the SFP transceiver from the following vendors:
1. Ruby Tech Corporation
2. Agilient Technologies
3. AVAGO Technologies
4. Finisar Corporation

Ruby Tech Corp.
3F, No.1, Lane 50, Nan Kang Road, Sec.3, Taipei, Taiwan
TEL:886-2-2785-3961 FAX:886-2-2786-3012
http://**www.rubytech.com.tw**
E-mail : rubytech@mail.rubytech.com.tw